



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Gurtej S. Sandhu et al.	)	Examiner: Erik Kielin
	)	
Serial No.: 08/636,069	)	Group Art Unit: 2813
	)	
Filed: April 22, 1996	)	Docket: 303.573US1
	)	
For: METHOD TO REDUCE FIXED CHARGE IN CVD OZONE DEPOSITED FILMS	)	

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**APPELLANT'S REPLY TO EXAMINER'S ANSWER**

Mail Stop Appeal Brief  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appellant addresses the Examiner's Answer (hereinafter the "Answer") dated September 1, 2004 and responds with the attached Reply which respectfully disagrees with the assertions set forth by the Examiner. A detailed reply follows.

In summary, Appellant respectfully reiterates its request for consideration and reversal of the rejections of pending claims 1, 2, 4, 5, 31, 33-36, and 38-54.

## **REMARKS ON PARAGRAPH (7) GROUPING OF CLAIMS**

Appellant respectfully disagrees with the statement in Paragraph (7) Grouping of Claims that the claims have not been separately argued. In certain places where a rejection grouped claims, Appellant made arguments to overcome the rejection, but Appellant does not agree that doing so amounted to a lack of separate argument. For instance, Appellant submits that the traversals from previous responses to Office Actions, (including, but not limited to, the response dated June 24, 2003 to the Office Action dated March 24, 2003, incorporated by reference on page 8 of the Appeal Brief), which were incorporated by reference in the Appeal Brief, also separately argue the individual claims alone and in various groupings depending upon the specific claimed feature contained in the particular claims. Thus, Appellant submits that the claims stand or fall separately.

## **REMARKS ON PARAGRAPH (10) GROUNDS OF REJECTION**

### **(1) Claims 1, 2, 4-6, 31, 33-36, and 38-54 Meet the Requirements under 35 U.S.C. § 112, First Paragraph Enablement**

The Answer on page 4 substantially repeats the rejection of the Final Office Action and then relies on *New Railhead Manufacturing LLC v. Vermeer Manufacturing Co.*, 63 USPQ2d 1843 (CAFC 2002), and asserts: “In the instant case, one of ordinary skill has not been reasonably apprised that Appellant was in any manner in possession of *indirect* illumination of the substrate surface.” (emphasis in original).

Appellant repeats the traversals of the Appeal Brief which are hereby incorporated by reference to support a finding that the specification does indeed teach the recited subject matter. As for the *New Railhead* argument, Appellant respectfully submits that one of skill in the art would have been able to understand the recited subject matter based on the application as filed. The assertion appears to be another form of official notice and is unsupported by affidavit or other documentation. Furthermore, without admitting the assertion, but only for the sake of argument, it is respectfully submitted that one of skill in the art would appreciate that a substrate could be illuminated without directly exposing the substrate to a light source. Thus, Appellant respectfully repeats the traversals of

record and submits that the specification does support the claim language of claims 1, 2, 4-6, 31, 33-36, and 38-54. Thus the rejection should be reconsidered and withdrawn.

**(2) Claims 45 and 50 Meet the Requirements under 35 U.S.C. § 112, First Paragraph Enablement.**

The Answer merely repeats the previous arguments from the Final Office Action dated September 10, 2003. Accordingly, Appellant repeats the previous arguments from the Appeal Brief and all previous traversals.

Reconsideration and withdrawal of the rejection is respectfully requested.

**(3) Claims 1, 2, 4-6, 31, 33-36, and 38-54 Meet the Requirements under 35 U.S.C. § 112, First Paragraph Enablement.**

The Answer appears to substantially repeat the rejections of the Final Office Action, which were traversed in prosecution and in the Appeal Brief. The arguments from the Appeal Brief are hereby repeated to support the request for withdrawal of the rejection.

Appellant notes that the Answer includes a reference to *Durel Corp. v. Osram Sylvania, Inc.*, 256 F.3d 1298, 1306-07 (Fed. Cir. 2001) and to *Enzo Biochem, Inc. v. Calgene*, 188 F.3d 1362, 1374-75 (Fed. Cir. 1999). Appellant notes that the Answer states that they relate to “where technology was too unpredictable to ensure that the results as to one cell type would hold as to another.” Appellant respectfully submits that the Answer appears to be finding the present technology predictable for purposes of rejecting the feasibility of the recited subject matter, yet relies on unpredictability for rejecting the recited subject matter on enablement. As such it is respectfully submitted that the rejections are inconsistent and should be withdrawn. Furthermore, it is respectfully submitted that cell types are not analogous to the technology recited.

The rejection also relied on *In re Ghiron*, 442 F.2d 985, 991, 169 USPQ 723, 727 (CCPA 1971) for the assertion that the application:

“ . . . must provide a sufficient disclosure of the apparatus if the apparatus is not readily available. See also, *In re Gunn*, 537 F.2d 1123, 1128, 190 USPQ 402, 406 (CCPA 1976). No such apparatus is readily available, since the

evidence clearly indicates that the claimed method will not work in the presently claimed pressure range of 200 to 760 Torr.”

Appellant respectfully traverses this line of argument as incorrectly assuming that the present subject matter will not work as recited and that the disclosure is not adequate. As such, it is respectfully submitted that these additional arguments be withdrawn for being deficient on their face.

Withdrawal of the rejections and allowance of the rejected subject matter are respectfully requested.

**(4) Claims 1, 2, 4-6, 31, 33-36, and 38-54 Meet the Requirements under 35 U.S.C. § 112, First Paragraph Written Description.**

The Answer adds some additional language, but substantially repeats the rejection made in the Final Office Action. Appellant respectfully submits that the traversals set forth in prosecution and restated in the Appeal Brief adequately address the issues raised by the Answer. The Answer then concludes that a certain interpretation would “reinstate, *inter alia*, the rejection of the claims over Hisumane alone.” Appellant respectfully submits that such rejection is improper on several grounds. Appellant respectfully submits that the Office had an opportunity to raise such a rejection by reinstating prosecution after the filing of Appellant’s Appeal Brief and declined to do so. Thus, no such rejection is formally made in this matter and the comments of the Answer are improper. Furthermore, the Answer’s assumptions about the interpretation of the claim language are incorrect since the claims were amended over the course of prosecution. Appellant is not requesting conflicting interpretations. As such, it is respectfully submitted that review of this application focus on the claims as they currently stand and the arguments set forth for such claims. Appellant respectfully traverses these assertions in light of the claims as currently pending.

Withdrawal of the rejection and an order allowing the pending claims are respectfully requested.

**(5) The Disclosure Meets the Requirements under 37 CFR 1.81(a) and 37 CFR 1.83(a).**

The Answer states that this issue is not appealable. Appellant respectfully submits that one of ordinary skill in the art would understand and be able to practice the invention without undue experimentation without additional figures, which are therefore not required. An order to this effect is respectfully requested from the Board.

**(6) Claims 31, 33, 34, 38-40, 42, and 52 are Unobvious under 35 U.S.C. § 103(a) over Roche (US 4581248) in view of Hisamune (JP 02-050966) and Considered with Bowen et al. (US 4579750).**

The Answer essentially repeats almost verbatim the rejection of the Final Office Action dated September 10, 2003. Appellant repeats the arguments used in the Appeal Brief and respectfully requests this rejection be reconsidered and withdrawn.

**(7) Claim 35 is Unobvious under 35 U.S.C. § 103(a) over Roche (US 4581248) in View of Hisamune (JP 02-050966) and Considered with Bowen et al. (US 4579750) and Further in View of Takabayashi (US 5112647).**

The Answer appears to repeat verbatim the rejection of the Final Office Action dated September 10, 2003. Appellant repeats the arguments used in the Appeal Brief and respectfully requests this rejection be reconsidered and withdrawn.

**(8) Claim 36 is Unobvious under 35 U.S.C. § 103(a) over Roche (US 4581248) in View of Hisamune (JP 02-050966) and Considered with Bowen et al. (US 4579750).**

The Answer appears to repeat verbatim the rejection of the Final Office Action dated September 10, 2003. Appellant repeats the arguments used in the Appeal Brief and respectfully requests this rejection be reconsidered and withdrawn.

**(9) Claims 1, 2, 4-6, 41, 43-50, 53, and 54 are Unobvious under 35 U.S.C. § 103(a) over Roche (US 4581248) in View of Hisamune (JP 02-050966) and Considered with Bowen et al. (US 4579750) and Further in View of Imai et al. (EP 0 562 625 A2).**

The Answer appears to repeat verbatim the rejection of the Final Office Action dated September 10, 2003. Appellant repeats the arguments used in the Appeal Brief and respectfully requests this rejection be reconsidered and withdrawn.

**COMMENTS ON PARAGRAPH 11 RESPONSE TO ARGUMENT**

Detailed comments to the items identified as “Issues” are provided below:

*ISSUE 1*

The Answer appears to be restating points made earlier and does not appear to advance the arguments in any substantial way. Appellant believes that this issue has been appropriately addressed by the Appeal Brief and that any related rejections should be ordered to be withdrawn by the Board.

*ISSUE 2*

The Answer states that regarding Appellant’s issue 2, claims 45 and 50 are not enabled due to the failure to include in the claims specific language regarding an oxygen source. The Answer admits that the open-ended language of comprising does not exclude the oxygen source, but maintains the same objection to the claims that the critical element of atomic oxygen “cannot be materialized from nowhere but instead must be provided for in the reaction volume”. Appellant submits that the claims properly recite patentable subject matter.

*ISSUE 3*

The Answer states regarding issue 3, that claims 1, 2, 4-6, 31, 33-36, and 38-45 are not enabled over the pressure range of 200 Torr to 760 Torr. The Answer repeats the response given in the Office Action dated September 10, 2003.

Appellant submits that the record to date fails to address Appellant's argument that the Bowen reference is inapplicable because of having a different temperature range than the claimed invention due to the fact that the non specified temperature of the Bowen reference must be low enough to allow for plastic components. The Answer has not given a reason why it disagrees with Appellant's argument regarding the temperature range of Bowen. Since Bowen is inapplicable, the Answer's argument that Bowen proves the claimed pressure ranges are inoperable also fail.

The Answer states that Appellant is mistaken in suggesting that MPEP 2141.02 requires that a reference must be taken as a whole, and suggests that the Bowen reference, taken as a whole, "provides evidence that the instant claim limitations, cannot simultaneously exists (sic) in the pressure range of 200 to 760 Torr". Appellant submits that the Answer does not address the issue of the Bowen relating to a different temperature range (other than a general statement that the number of molecule in the system is fixed), and teaches a pressure range of 0.1 atmospheres to be "relatively high" (see Bowen at column 9, lines 22-30). Thus, Bowen is different from both the pressures and temperatures of the claimed subject matter. Appellant submits that the Answer has not shown how a reference so removed from the specific temperature and pressure ranges of the claimed subject matter could be applicable for inherency and for obviousness.

Appellant disagrees with the assertion that Appellant's arguments are defective for "failing to address how the first paragraph of 35 U.S.C. 112 is complied with, including how the specification enables any person skilled in the art to make and use the subject matter". Appellant submits that every issue raised by the Office in each of the Office Actions in this application have been fully responded to, and that the Office has largely asserted that the specified pressure ranges are inoperable. Appellant disagrees and requests that the Board overturn the rejections.

#### *ISSUE 4*

The Answer states that claims 1, 2, 4-6, 31, 33-36, and 38-45 are not enabled due to the language "without directly exposing the substrate surface to the light source." The Answer "respectfully disagrees for reasons presented in the rejection of the claims above

and for the additional reasons presented in addressing issues labeled (1) and (3) above, which are incorporated herein by reference, but omitted as repetitious”.

Appellant repeats the arguments set forth in the Appeal Brief. Appellant requests that the Board overturn the rejections.

#### *ISSUE 6*

The Answer states with regard to issue 6, that Appellant’s brief “admits that Bowen heats the substrate and gases at page 10, last paragraph”. Appellant submits that the Board should read the entire paragraph which states “[H]owever, the heating referenced must be at very low temperatures so as to be consistent with the preceding teachings of Bowen and avoid the melting of plastic”, and thus the Answer’s inference that the Bowen reference heats the substrate in a comparable way to the higher temperatures of the recited subject matter is incorrect and should be withdrawn.

Appellant submits that the suggested combination of references is unclear and that the asserted inherency of Bowen is unclear. It is believed that the disparate operating conditions of the various references clearly establish that there is no motivation to combine Bowen with Roche and Hisanume absent use of Appellant’s disclosure as a guide. The Answer asserts that the Roche and Bowen references show that the method will not operate in the claimed pressure region, but ignores that the Roche reference requires a “laser light” to cause the reaction, and Bowen “who teaches the same photo CVD method as Roche” requires “irradiating the only (sic) region just above the substrate and keeping the pressure around 0.01 atm (7.6 Torr)”. Appellant submits that the present subject matter is different from the cited references at least because the “process is different from photon-assisted CVD, where it is the substrate reaction surface on which photons are directed to increase reaction rates” (see page 7, lines 24-26 of the present specification), and because the pressures of the cited references are different from the claimed range of 200 Torr to 760 Torr.

#### *ISSUE 7*

The Answer states with regard to issue 7, that the “arguments provided in the Brief fail to teach why one of ordinary skill would not use a *notoriously* well known

carrier gas, helium (He), used as in the photo-assisted CVD method of Takabayashi, as the carrier gas in Roche”.

Appellant responded to the cited Takabayashi reference as having to do with formation of amorphous silicon, which is outside the claimed subject matter. Appellant further noted that the Takabayashi reference teaches a temperature that is "in general . . . between 30° C and 450° C", which also lies outside the claimed subject matter. Thus the suggested combination of Roche with Takabayashi has an inappropriate use of temperature that teaches away from the claimed subject matter. Takabayashi also relates to a pressure that is referred to as "vacuum" and specified as  $1 \times 10^{-2}$  to  $1 \times 10^2$  Torr, which pressure lies outside the claimed subject matter having 200 Torr to 760 Torr. Thus, Appellant respectfully requests that the Board overturn this rejection.

#### *ISSUE 8*

The Answer states with regard to issue 8, that claim 36 is unobvious, asserts that the “Brief again incorrectly suggests that Bowen is used for something other than inherency”.

Appellant respectfully submits that the rejection is unclear and that a reference which teaches away from recited subject matter is an improper reference for obviousness and for inherency. Additionally, Sato has many deficiencies that cannot be reconciled by combining any of Roche, Hisanume, and Bowen. One deficiency is that Sato's temperatures are uniformly below the recited subject matter. Thus, there is no motivation to combine Sato with Roche, Hisanume, and Bowen.

Appellant respectfully requests that the Board overturn the rejections.

#### *ISSUE 9*

The Answer states again that Appellant uses the Bowen reference “for something other than inherency”.

Appellant's Appeal Brief references the Office Action and the Imai reference, with the Bowen reference only being noted as part of the rejection. The Imai reference is noted to be primarily concerned with oxide reflow processes after the CVD process. Imai's CVD process is noted to be carried out at a temperature of about 350° C, which

temperature tends to teach away from Imai's representation of a "conventional deposition" of "somewhere between 350 and 450 °C." Appellant submits that the Appeal Brief does not use the Bowen reference improperly.

In view of the above discussion, Appellant respectfully requests that the Board overturn the rejections.

Appellant repeats the arguments set forth in the Appeal Brief, which are incorporated by reference in their entirety, and provides the foregoing discussion to supplement same. Appellant maintains its request for withdrawal of the rejections of pending claims 1, 2, 4-6, 31-36, 38-54 under 35 U.S.C. §§ 112 and 103(a). Reversal of all of the rejections and objections are respectfully requested, as well as the allowance of the rejected claims.

Please charge any additional fees to Deposit Account 19-0743.

Respectfully submitted,

GURTEJ S. SANDHU et al.

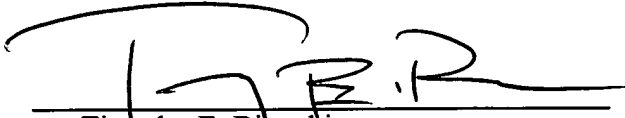
By their Representatives,

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Date NOVEMBER 1, 2004 By

  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Appeal Brief, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 1st day of November, 2004.

  
Name

Signature